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EXAMINER

MCCALL, ERIC SCOTT

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/748,350	DOUGLAS, PAUL ALLEN	
	Examiner	Art Unit	
	Eric S. McCall	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 17 and 20 is/are rejected.
- 7) ☒ Claim(s) 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

WHEEL ALIGNMENT SYSTEM FOR SINGLE TRACK VEHICLES

FINAL OFFICE ACTION

In response to the Applicant's amendment dated June 13, 2005

SPECIFICATION

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. The Applicant's cooperation is requested in correcting any errors of which the Applicant may become aware of in the specification.

However, the amendment filed June 13, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention.

The subject matter in question appears on page 2 of the Applicant's amendment. This subject matter is the paragraph that the Applicant has added to page 5 (after the second paragraph) of the specification. This paragraph is deemed as new matter not supported by the original specification. Although this paragraph discusses the prior art, it nonetheless was not supported by the originally filed disclosure. Thus, the Applicant is not entitled to add such subject matter at this time.

The Applicant is required to cancel the new matter in the reply to this Office Action.

CLAIMS

As noted in the previous office action, the preamble of all of the independent claims pertaining to "a single track vehicle, in particular a motorcycle or bicycle" have not been given patentable weight because the body of the respective claims do not rely upon the preambles thereof for completeness.

35 U.S.C. § 112

(First Paragraph)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 3 and 20 have been amended to state that the location of the front alignment reference mark is not dependent on the exact manufacturing alignment of the rear target mirror. However, no mention in the Applicant's originally filed disclosure can be found supporting such a limitation. Correction or clarification is required.

Furthermore, no mention in the Applicant's originally filed disclosure can be found supporting the added limitations to claims 3 and 20 of the improvement of portability and durability by the elimination of a fragile mirror as now claimed. Correction or clarification is required.

(Second Paragraph)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention because the claims,

(1) The claims set forth that a rear target is used in place of the rear target mirror, however claims 2 and 17, from which claims 3 and 20 depend, set forth limitations that are dependent upon a rear target mirror. Thus if the rear target mirror is not used, the function of the front laser target, front alignment target reference mark, the reflection of the rearward projecting laser beam as a forward beam, the common plane between the rearward and forward beams, and so on are indefinite, and

(2) The claim has been amended to further define the front alignment reference mark in reference to the rear target mirror however the claim sets forth that the rear mirror does not exist. Thus, a contradiction exists.

35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted prior art of Roberts, Jr. et al. (4,150,897).

With respect to claim 1, Roberts, Jr. et al. teach a method for alignment of front and rear wheels of a vehicle, comprising the steps of:

(a) providing a front reference line (the centerline established by shaft 28) perpendicularly from the longitudinal centerline of said front wheel (12a) to one side of said vehicle (fig. 1) and having a front alignment reference point (the point where the reflected projected beam strikes the alignment apparatus connected to the front wheel) located along said front reference line at a pre-determined distance from the longitudinal centerline of said front wheel (note, the Applicant has not defined in the claim the actual distance of the “pre-determined distance” and thus the front alignment reference point of the prior art is deemed as being at a “pre-determined distance” from the longitudinal centerline of the front wheel as claimed);

(b) providing a rear reference line (the line established by mirror 16a) perpendicularly from the longitudinal centerline of said rear wheel (12c) to the same side of said vehicle (fig. 1)

and having a rear alignment reference point (the point on the mirror where the projected beam strikes the mirror to be reflected back to the front wheel) located along said rear reference line at a pre-determined distance from the longitudinal centerline of said rear wheel (note, the Applicant has not defined in the claim the actual distance of the “pre-determined distance” and thus the rear alignment reference point of the prior art is deemed as being at a “pre-determined distance” from the longitudinal centerline of the rear wheel as claimed);

(c) providing a rearward projecting alignment reference line perpendicularly oriented to said front reference line (col. 2, lines 60-64) and located at a pre-determined distance from the longitudinal centerline of said front wheel (note, the Applicant has not defined in the claim the actual distance of the “pre-determined distance” and thus the prior art is deemed as having such a “pre-determined distance” from the longitudinal centerline of the front wheel as claimed);

(d) providing a forward projecting alignment reference line (ie. the reflected beam) perpendicularly oriented to said rear reference line and located at a “pre-determined distance” (as claimed) from the longitudinal centerline of said rear wheel (col. 2, lines 64-66);

(e) said front wheel being moved such that said rearward projecting alignment reference line (ie. projected beam) is aligned with said rear alignment reference point (ie. point on the mirror), and said rear wheel being moved such that said forward projecting alignment reference line (ie. reflected beam) is aligned with said front alignment reference point (ie. point where the reflected beam strikes device 14), so that a common reference plane is formed (col. 4, lines 1-13), with said front reference line and said rear reference line forming perpendicular transversals

between said common reference plane and the longitudinal centerline between said front and said rear wheels;

whereby said front wheel and said rear wheel are aligned with each other.

With respect to claim 2, Roberts, Jr. et al. teach an apparatus for alignment of front and rear wheels of a vehicle, comprising:

- (a) a center rib disposed along the longitudinal centerline of said front wheel (12a);
- (b) a center rib disposed along the longitudinal centerline of said rear wheel (12c);
- (c) a front alignment unit including a front alignment strut (28), a front laser module (14), and a front laser target (30a) having an opaque surface and having a front alignment target reference mark placed at a “fixed and pre-determined distance” (as defined by the claim) along the length of said front alignment unit (point, 30a, where the reflected beam strikes);
- (d) means for disposing said front alignment strut perpendicularly to said center rib of said front wheel of said vehicle so that a rearward projecting laser beam from said front laser module, projecting perpendicularly to said front alignment strut will be parallel to the longitudinal centerline of said front wheel (fig. 1) and such that said front laser module and said front alignment target reference mark will be located at a “pre-determined distance” (as defined by the claim) from the centerline of said front wheel;
- (e) a rear alignment unit including a rear alignment strut (connection point of mirror 16a), and a rear target mirror (16a) having a reflective surface (fig. 1) and having a rear alignment

target reference mark (point on mirror where projected beam strikes) placed at a “fixed and pre-determined distance” (as defined by the claim) along the length of said rear alignment unit;

(f) means for disposing said rear alignment strut perpendicularly to said center rib of said rear wheel of said vehicle so that said rear alignment target reference mark will be located at a “pre-determined distance” from the centerline of said rear wheel, and such that said rearward projecting laser beam will be reflected as a forward projecting laser beam toward said front laser target (fig. 1);

(g) said front wheel being moved such that said rearward projecting laser beam is aligned with said rear alignment target reference mark (reflecting point on mirror), and said rear wheel being moved such that said forward projecting laser beam is aligned with said front alignment target reference mark (30a), such that said rearward projecting laser beam and said forward projecting laser beam form a common reference plane parallel to the centerline between said front and said rear wheels (col. 4, lines 1-13);

whereby said front wheel and said rear wheel are aligned with each other.

With regards to claim 4, Roberts, Jr. et al. suggest disposing the front alignment strut (28) perpendicularly to said center rib of said front wheel (12a) wherein the laser and reference mark are at a given distance (ie. a “pre-determined distance”) consisting of an outside wheel clamp beam (18a) and threaded rod for clamping said center rib of said front wheel between said front alignment strut and said outside wheel clamp beam (col. 3, lines 15+).

With regards to claim 5, Roberts, Jr. et al. suggest disposing the rear alignment strut (16a) perpendicularly to said center rib of said rear wheel wherein the reference mark is at a given distance (ie. a "pre-determined distance") consisting of an outside wheel clamp beam (18c) and threaded rod for clamping said center rib of said rear wheel between said rear alignment strut and said outside wheel clamp beam (col. 3, lines 15+).

35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of Roberts, Jr. et al. (4,150,897).

With regard to claims 3 and 20, Roberts, Jr. et al. teach a laser beam being projected from alongside the front of the vehicle to the rear of the vehicle and reflected back to the front of the vehicle.

Roberts, Jr. et al. fail to teach the opposite of a laser beam being projected from alongside the rear of the vehicle to the front of the vehicle and reflected back to the rear of the vehicle.

Nonetheless, it would have been obvious to one having ordinary skill in the art armed with said teaching to project a laser beam from alongside the rear of the vehicle to the front of the vehicle and reflected back to the rear of the vehicle.

The motivation being that projecting a laser beam from alongside the rear of the vehicle to the front of the vehicle and reflected back to the rear of the vehicle is a mirror image of, and thus of the exact same principle as, the specific teaching of Roberts, Jr. et al. in order to achieve the exact same result. As further evidence, the Applicant has even disclosed these two different approaches as functionally equivalent embodiments which suggests that one approach is not patentably distinct from the other approach.

With respect to claim 17, Roberts, Jr. et al. teach an apparatus for alignment of front and rear wheels of a vehicle, comprising:

- (a) a front inside wheel clamp beam (18a) extending across the lip of said front wheel;
- (b) a front alignment unit including a front alignment strut (28), a front laser module (14), and a front laser target (30a) having an opaque surface and having a front alignment target reference mark placed at a "fixed and pre-determined distance" (as defined by the claim) along the length of said front alignment unit (point, 30a, where the reflected beam strikes);
- (c) means for disposing said front alignment strut perpendicularly to said front inside wheel clamp beam so that a rearward projecting laser beam from said front laser module projecting perpendicularly to said front alignment strut will be parallel to the longitudinal centerline of said front wheel (fig. 1) with said laser module and said front alignment target

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reference mark located at a “precise and known distance” (as defined by the claim) from the centerline of said front wheel;

(d) a rear inside wheel clamp beam extending across the lip of said rear wheel;

(e) a rear alignment unit including a rear alignment strut (connection point of mirror 16a), and a rear target mirror (16a) having a reflective surface (fig. 1) and having a rear alignment target reference mark (point on mirror where projected beam strikes) placed at a “fixed and pre-determined distance” (as defined by the claim) along the length of said rear alignment unit;

(f) means for disposing said rear alignment strut perpendicularly to said rear inside wheel clamp beam so that said rear alignment target reference mark will be located at a “precise and known distance” from the centerline of said rear wheel, and such that said rearward projecting laser beam will be reflected as a forward projecting laser beam toward said front laser target (fig. 1);

(g) said front wheel being moved such that said rearward projecting laser beam is aligned with said rear alignment target reference mark (reflecting point on mirror), and said rear wheel being moved such that said forward projecting laser beam is aligned with said front alignment target reference mark (30a), such that said rearward projecting laser beam and said forward projecting laser beam form a common reference plane parallel to the centerline between said front and said rear wheels (col. 4, lines 1-13);

whereby said front wheel and said rear wheel are aligned with each other.

Although Roberts, Jr. et al. inherently teach a front (and rear) wheel clamp to attach the front (and rear) wheel alignment apparatus to the front (and rear) wheel, Roberts, Jr. et al. fail to explicitly teach a front (and rear) inside wheel clamp beam extending across the lip of said front (and rear) wheel so that said front (and rear) inside wheel clamp beam “forms a chord across the lip of the front (and rear) wheel”.

However, it would have been obvious to one having ordinary skill in the art to interpret the teaching of Roberts, Jr. et al. as having a front (and rear) inside wheel clamp beam extending across the lip of said front (and rear) wheel so that said front (and rear) inside wheel clamp beam forms a chord across the lip of the front (and rear) wheel.

The motivation being that Roberts, Jr. et al. shows a clamp connected to the hub of the front (and rear) wheel and protruding passed the outer edge of the wheel to the outer side of the front (and rear) wheel (Fig. 1) wherein the outer edge of the wheel's rim is inherently a lip. Thus, in the hands of one having ordinary skill in the art, Roberts, Jr. et al. would be interpreted as suggesting a front (and rear) wheel clamp forming a chord across the lip of the wheel.

Allowable Subject Matter

Claims 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

The Applicant's arguments have been considered but have not been found to be persuasive.

First, with respect to the Applicant's comments pertaining to the abstract of the independent claims, the Examiner points out that vehicles other than motorcycles or bicycles have front and rear wheels that are both movable and are of different widths. Nothing in the body of the respective claims require a motorcycle or bicycle.

Next, the Applicant argues that the prior art of Roberts, Jr. et al. provides no means for adjusting rear wheel alignment. However, the Examiner points out that the Applicant has never claimed a means for adjusting rear wheel alignment. Instead the Applicant has amended each independent claim to only state that the rear wheel is "moved" such that the forward projecting (beam) is aligned with the front reference point. The Examiner argues that the rear wheels of the prior art teaching are "movable", as claimed, because they, at a minimum, can move in a rotational direction. The rotational movement of the rear wheels meet the Applicant's claim limitation of "moving the rear wheel". The Examiner acknowledges the difference between a rotating rear wheel and a rear wheel that can be alignment adjusted (ie. toe, camber, etc.), however, the Applicant's choice of claim wording does not limit the rear wheel to only being adjusted with respect to toe, camber, etc. The rotational movement of the rear wheel of the prior

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art allows the said rear wheel to be moved so that the forward beam is aligned with a front reference mark as claimed.

The Applicant argues that the prior art provides no means for locating the wheel alignment apparatus at a precise and pre-determined distance from the wheel centerline. The Examiner simply points out that the phrase “precise and pre-determined distance” is a relative term wherein the Applicant has provided no reference or measurement as to any precise or pre-determined distance in any of the claims. The wheel alignment apparatus of the prior art is inherently at a distance from the wheel centerline. This distance is a function of the attachment of the alignment devices and the actual size of the various devices (brackets, projectors, mirrors, etc.). Thus, this and all distances are deemed as being at a “precise and pre-determined distance” as claimed because the Applicant has not defined in the claim what is the precise and pre-determined distance.

The Applicant next argues that the prior art provides no fixed rear target. The Examiner disagrees. The rear target of the prior art may be adjustable but it is fixable or the entire alignment apparatus would not work properly. Nonetheless, the Examiner simply states that the Applicant has not claimed a “fixed rear target”.

The Applicant contends that the prior art provides no means for setting wheel alignment for front and rear wheels that are of differing widths. The Examiner points out that the Applicant has never claimed setting wheel alignment with respect to wheel widths.

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The Applicant's comments pertaining to commercial success have been considered but have not been found to be persuasive because (1) the Applicant's claimed invention is clearly suggested by the applied prior art, (2) the Applicant has not clearly demonstrated commercial success, and (3) the Applicant's claim to commercial success is not shown to be based on the claimed invention.

With respect to the Applicant's arguments regarding the wheel center ribs that are positioned precisely along the centerline of the wheels, the Applicant points out in their arguments, as relied upon by the Examiner, that wheel center ribs are "commonly found on motorcycle wheels". Furthermore, the Examiner points out that the Applicant's claim regarding the center ribs is directed to an "apparatus" for wheel alignment and that the center ribs are not part of such an apparatus but instead part of the wheel to be aligned.

With respect to the Applicant's arguments pertaining to the surprising advantages in manufacturing with respect to claim 3, the arguments have not been found to be persuasive in view of the contradicting claim language as stated above in the rejections under 35 USC 112.

Finally, many of the Applicant's arguments apply to features of a specific claims yet those features parallel numerous claims. Due to the time constraints given to the Examiner, the Examiner has not replied to each individual argument, but instead the Examiner's arguments stated above apply to each claim in which the issue is at hand.

CONCLUSION

The Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric S. McCall whose telephone number is (571) 272-2183.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric S. McCall
Primary Examiner
Art Unit 2855
Aug. 15, 2005